

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 Claim 1. (Currently Amended) A process for controlling a ~~transfer voltage~~ in an image
2 forming apparatus, the image forming apparatus comprising an electrification roller electrifying a
3 surface of a photosensitive drum, a laser scanning unit forming an electrostatic latent image on the
4 surface of the photosensitive drum, a developing machine making the electrostatic latent image
5 visible, a transfer roller transferring the image to a recording paper and a fixer fixing the image
6 transferred to the recording paper, the process comprising the steps of:

7 storing within a memory image data to be printed when a print demand is received;

8 detecting the kind of paper selected by a user;

9 editing by reducing the number of pixels of the image data at a certain rate when the detected
10 paper is ~~thick~~ thicker than a certain thickness; and

11 transmitting the edited image data to the laser scanning unit and performing the printing work
12 for the edited image data.

1 Claim 2. (Previously Presented) The process according to claim 1, wherein the editing step
2 is performed using economy mode in which the pixels of the light scanned are equally split into an
3 integer number of pixels in order to represent one pixel of the image data, and only a certain number

of pixels among the equally split pixels of the light are scanned.

Claim 3. (Previously Presented) The process according to claim 1, wherein the editing step is performed using resolution enhancement technology mode in which the print area is split into a plurality of small areas, and some pixels among the total pixels for each resolution included in the respective small areas are removed.

Claim 4. (Currently Amended) A process for controlling a ~~transfer voltage~~ in an image forming apparatus, the image forming apparatus comprising a electrification roller electrifying a surface of a photosensitive drum, a laser scanning unit forming an electrostatic latent image on the surface of the photosensitive drum, a developing machine making the electrostatic latent image visible, a transfer roller transferring the image to a recording paper and a fixer fixing the image transferred to the recording paper, the process comprising the steps of:

storing at a memory image data to be printed when a print demand is received;
detecting the kind of paper selected by a user;
transmitting the image data to the laser scanning unit when the detected paper is a thick; and
decreasing the amount of the light emitted from the laser scanning unit at a predetermined rate and performing the printing work.

Claim 5. (Currently Amended) A process for controlling a ~~transfer voltage~~ in an image forming apparatus, the image forming apparatus comprising a electrification roller electrifying a

3 surface of a photosensitive drum, a laser scanning unit forming an electrostatic latent image on the
4 surface of the photosensitive drum, a developing machine making the electrostatic latent image
5 visible, a transfer roller transferring the image to a recording paper and a fixer fixing the image
6 transferred to the recording paper, the process comprising the steps of:

7 storing image data to be printed at a memory when a print demand is received;
8 detecting the kind of paper selected by a user;
9 transmitting the image data to the laser scanning unit when the detected paper is a thick; and
10 increasing a developing voltage applied to the developing machine to a predetermined
11 voltage level and then performing the printing work.

1 Claim 6. (Previously Presented) A process according to claim 5, wherein the predetermined
2 voltage level is equal to or less than -250 volts.

1 Claim 7. (Previously Presented) A process in an image forming apparatus, comprising:
2 storing within a memory image data to be printed on a printable medium by said
3 image forming apparatus;
4 making a determination of whether a grade of the printable medium selected by a user
5 of said image forming apparatus has a first thickness or has a second and greater thickness;
6 electrifying a surface of a photosensitive drum;
7 when said determination establishes that the printable medium selected has said
8 second and greater thickness, editing said image data by reducing to a reduced number of pixels, a

9 quantity of pixels representing said image data, and driving a laser scanning unit to form an
10 electrostatic latent image on said surface of said photosensitive drum in correspondence with said
11 reduced number of pixels;

12 driving a developer to convert said electrostatic latent image into a visible image;

13 driving a transfer roller to transfer said visible image to the printable medium
14 selected; and

15 fixing said visible image transferred to the printable medium selected.

1 Claim 8. (Previously Presented) The process according to claim 7, further comprised of:

2 generating said edited data by equally dividing said quantity of pixels into an integer
3 number of pixels with each said integer number of pixels representing a different pixel of said image
4 data; and

5 scanning onto said surface of said photosensitive drum only a certain number of
6 pixels among each said integer number of pixels.

1 Claim 9. (Previously Presented) The process according to claim 7, further comprised of
2 editing said image data by:

3 dividing said print area into a plurality of smaller areas each exhibiting a
4 corresponding resolution and each represented by a different group of said quantity of pixels; and
5 removing some of said pixels from within each said group.

1 Claim 10. (Previously Presented) The process according to claim 9, further comprising of
2 when said determination establishes that the printable medium selected has said first thickness,
3 performing a normal printing work without editing said image data by not reducing the number of
4 pixels, the quantity of pixels representing said image data.

1 Claim 11. (Previously Presented) A process in an image forming apparatus, comprising:
2 storing within a memory image data to be printed on a printable medium by said
3 image forming apparatus;
4 making a determination of whether a grade of the printable medium selected by a user
5 of said image forming apparatus has a first thickness or has a second and greater thickness;
6 electrifying a surface of a photosensitive drum;
7 when said determination establishes that the printable medium selected has said
8 second and greater thickness, transmitting said image data to a laser scanning unit and forming an
9 electrostatic latent image on said surface of said photosensitive drum after decreasing an amount of
10 light emitted by said laser scanning unit at a predetermined rate;
11 driving a developer to convert said electrostatic latent image into a visible image;
12 driving a transfer roller to transfer said visible image to the printable medium
13 selected; and
14 fixing said visible image transferred to the printable medium selected.

1 Claim 12. (Previously Presented) The process according to claim 11, further comprising of

lowering an engagement force of a toner coated onto the photosensitive surface of said photosensitive drum.

Claim 13. (Currently Amended) A process for controlling ~~transfer voltage~~ in an image forming apparatus, comprising:

storing within a memory image data to be printed on a printable medium by said image forming apparatus;

making a determination of whether a grade of the printable medium selected by a user of said image forming apparatus has a first thickness or has a second and greater thickness;

electrifying a surface of a photosensitive drum;

transmitting said image data to a laser scanning unit and forming an electrostatic latent image on said surface of said photosensitive drum;

driving a developer to convert said electrostatic latent image into a visible image by applying a first developing voltage to a developing roller when said determination indicates that the printable medium selected has said first thickness, and by applying a second developing voltage exhibiting a greater magnitude than said first voltage to said developing roller when said determination indicates that the printable medium selected has said second and greater thickness;

driving a transfer roller to transfer said visible image to the printable medium selected; and

fixing said visible image transferred to the printable medium selected.

1 Claim 14. (Previously Presented) A process according to claim 13, further comprised of said
2 second developing voltage being equal to or less than -250 volts.

1 Claim 15. (Previously Presented) An image forming apparatus, comprising:
2 a memory storing image data to be printed on a printable medium by said image forming
3 apparatus;
4 a photosensitive drum bearing an exterior circumferential surface, positioned along a path
5 of conveyance of a printable medium selected by a user through said image forming apparatus;
6 an electrification roller positioned to electrify said surface of said photosensitive drum;
7 a controller responding to passage of a printable medium along said path by making a
8 determination of whether a grade of the printable medium selected by a user of said image forming
9 apparatus has a first thickness or has a second and greater thickness, when said determination
10 establishes that the printable medium selected has said second and greater thickness, editing said
11 image data by reducing to a reduced number of pixels, a quantity of pixels representing said image
12 data, and driving a laser scanning unit to form an electrostatic latent image on said surface of said
13 photosensitive drum in correspondence with said reduced number of pixels;
14 a laser scanning unit forming an electrostatic latent image on said surface of said
15 photosensitive drum in accordance with output data received from said controller;
16 a developer disposed to convert said electrostatic latent image into a visible image;
17 a transfer roller disposed along said path opposite from said photosensitive drum, driven to
18 transfer said visible image to the printable medium selected; and

19 a fixing unit positioned along said path to fix said visible image transferred to the printable
20 medium selected.

1 Claim 16. (Previously Presented) The apparatus according to claim 15, further comprised
2 of said controller editing said image data by generating said edited data by equally dividing said
3 quantity of pixels into an integer number of pixels with each said integer number of pixels
4 representing a different pixel of said image data, and scanning onto said surface of said
5 photosensitive drum only a certain number of pixels among each said integer number of pixels.

1 Claim 17. (Previously Presented) The apparatus according to claim 15, further comprised
2 of said controller editing said image data by dividing said print area into a plurality of smaller areas
3 each exhibiting a corresponding resolution and each represented by a different group of said quantity
4 of pixels, and removing some of said pixels from within each said group.

1 Claim 18. (Previously Presented) The process according to claim 5, with the increasing of
2 the developing voltage level being applied to a developing roller in accordance with the kind of
3 paper being detected.